



HEWLETT  
PACKARD

# Real-Time Emulator Intel® 8080/8085

MODEL 64202S  
MODEL 64203S

TECHNICAL DATA 1 NOV 82

## Description

Models 64202S and 64203S Emulators offer real-time emulation of Intel 8080 and 8085 microprocessors. This capability brings the power of emulation to all phases of microprocessor-based product design, development, and maintenance. As subsystems of the HP 64000 Logic Development System, Models 64202S and 64203S emulators also provide access to the other sophisticated software and hardware development tools of the 64000 System. With the versatile 64000 System, you can speed your 8080/8085-based systems to market.

Models 64202S and 64203S are part of an integrated set of design and development aids for 8080/8085 processor products. Compilers and assembler/linkers are available to accommodate programming at the most efficient level. Directed syntax softkeys and an easy-to-use, responsive editor streamline software development and documentation. Accelerate your design cycle by selecting the best 64000 system for your 8080/8085 development needs. Convenience, ease of use, and the measurement power of the 64000 System help you produce a better 8080/8085 product in less time, to gain a competitive edge.

## Emulator Features

- Real-time execution to 4 MHz (8080) or 5 MHz (8085) with all memory mapped to target system
- Real-time execution to 3.5 MHz (8080) or 4.75 MHz (8085) independent of emulation/target memory assignment

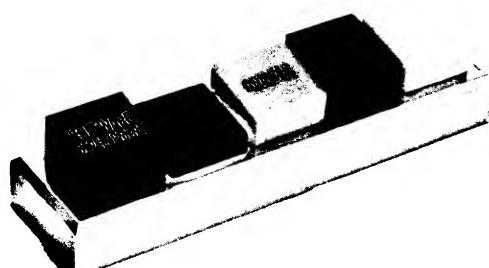


## Memory Mapping Features

- Mapped in 1k-byte blocks over 64k-byte address space
- Up to 64k bytes of emulation memory available
- Designate blocks as RAM, ROM, or illegal
- Assign blocks to host system or target system

## Analysis and Debugging Features

- Powerful internal logic analyzer for real-time monitoring of processor bus activity
- Single cycling and register displays of processor's internal activity
- Simulated I/O for emulator access to 64000 System resources: disc files, printer, and development station keyboard, display, and RS-232 port
- Symbolic debugging



## **Characteristics**

### **ELECTRICAL, 64202S**

**Maximum Clock Speeds (Valid with Intel 8224-4 clock generator):** With no wait states inserted, 4 MHz with all memory assigned to target system; 3.5 MHz with any memory assigned to emulation memory. With wait states inserted, 4 MHz. (Wait states are inserted only when accessing emulation memory.)

**Emulation Pod to Target System Interface:** low power Schottky TTL levels with capacitance of 20 pF, except clock inputs which meet Intel 8080 specifications plus capacitance of approx 20 pF.

### **ELECTRICAL, 64203S**

**Maximum Clock Speeds:** With no wait states inserted, 5 MHz with all memory assigned to target system; 4.75 MHz with any memory assigned to emulation memory. With wait states inserted, 5 MHz. (Wait states are inserted only when accessing emulation memory.)

**Emulation Pod to Target System Interface:** low power Schottky TTL levels plus capacitance of approx 20 pF.

### **PHYSICAL**

**Cable Length:** development station to emulation pod, approx 1.5 m (5 ft); emulation pod to target system interface, approx 305 mm (1 ft).

### **ENVIRONMENTAL**

**Temperature:** operating, 0° to 40° C (+32° to +104° F); nonoperating, -40° to +75° C (-40° to +167° F); operating survival, -20° to +50° C (-4° to +122° F).

**Altitude:** operating, 4600 m (15 000 ft); nonoperating, 15 300 m (50 000 ft).

**Relative Humidity:** 5% to 80%.

## **Ordering Information**

A complete 8080/8085 emulator consists of Model 6420XS Emulator subsystem, and Model 64152S Emulation Memory system; and Model 64300A 40-channel Internal Logic Analyzer is available to display activity on the emulator bus. Emulator software is available on flexible disc (6420XSF) or tape cartridge (6420XST) for transfer of the emulator operating system to mass storage. Model 64840AF/AT 8080/8085 Assembler/Linker and Model 64810AF/AT 8080/8085 Pascal Compiler are highly recommended; they are also transferred to mass storage. Only one set of software is needed for each 64000 System cluster.

**Model 64202S 8080 Emulation Subsystem**

**Model 64203S 8085 Emulation Subsystem**

**Model 64202SF 8080 Emulation Software** on flexible disc

**Model 64202ST 8080 Emulation Software** on tape cartridge

**Model 64203SF 8085 Emulation Software** on flexible disc

**Model 64203ST 8085 Emulation Software** on tape cartridge

**Model 64152S 32k Byte Emulation Memory System**

**Option 011 64k Byte Emulation Memory System**

**Model 64300A 40-Channel Internal Logic Analyzer**

**Model 64840AF 8080/8085 Assembler/Linker** on flexible disc

**Model 64840AT 8080/8085 Assembler/Linker** on tape cartridge

**Model 64810AF 8080/8085 Pascal Compiler** on flexible disc

**Model 64810AT 8080/8085 Pascal Compiler** on tape cartridge

### **COMPONENTS**

**Model 64201A 8080/8085 Emulation Control Board**

**Model 64202A 8080 Emulator Pod**

**Model 64203A 8085 Emulator Pod**

**Model 64151A Emulation Memory Control Board**